

33. (New) The expanded dough article of claim 31 in which the dough formed by mixing the dry blend and the wet blend further comprises an encapsulated leavening agent.

34. (New) The expanded dough article of claim 31 in which mixing the dough and expanding the dough are done concurrently.

35. (New) The expanded dough article of claim 32 further comprising sealing the container so as to form a headspace with the headspace having an oxygen concentration that is not more than 4% by volume.

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on November 28, 2001, and the references cited therewith.

Claims 1, 27 and 30 are amended, claims 10 and 29 are canceled, and claims 31 - 35 are added; as a result, claims 1 - 9, 11 - 15, 27 - 28 and 30 - 35 are now pending in this application, with claims 16 - 26 provisionally canceled pending the Examiner's disposition of applicant's traverse of restriction.

Affirmation of Provisional Election

Restriction to one of the following sets of claims was required: Group I, claims 1 - 15 and Group II, claims 16 - 26.

As provisionally elected by Applicant's representative, Janal Kalis, on November 7, 2001 Applicant provisionally elects, with traverse, to prosecute the invention of Group 1, claims 1-15 and 27-30.

Applicant respectfully submits that the Examiner's requirement for restriction is in error and respectfully requests reconsideration and withdrawal of this requirement on the following

basis: claims 16 – 26 are directed to embodiments of a method of forming the cellular structure within the dough comprising the dough article using an inert gas. The cellular structure thus formed is a key element of the structure claimed in original claims 1 – 15 and 27 – 30. The claims of the non-elected invention, claims 16-26, are provisionally canceled pending the Examiner's disposition of this matter. In the event the restriction requirement is maintained, Applicant reserves the right to later file continuations or divisions having claims directed to the non-elected inventions.

Applicant acknowledges the Examiner's remarks regarding amendment of inventorship under 37 CFR 1.48(b). Applicant respectfully submits that should amendment of inventorship be required the appropriate action will be taken in a timely fashion.

§112 Rejection of the Claims

Claim 10 was rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 10 is canceled.

§102 Rejection of the Claims

Claims 1, 3-5, 8, 10, 14-15 and 27-29 were rejected under 35 USC § 102(a) as being anticipated by Le Flecher et al. (EPO 868850 A 1). The Examiner states that "The reference discloses all the limitations..." of these claims. Applicant respectfully requests that the Examiner reconsider and withdraw this assertion. Applicant submits that claim 1 originally recited "...a dough having a cellular network..." and that claim 1, which was amended for the sake of clarity, now recites: "...an elastic gluten based dough having a cellular network..." Support for this amendment can be found at page 3, lines 29 – 31 of the instant specification.

Applicant further submits that Le Flecher et al. do not disclose a dough having the structure claimed in claim 1 as they do not disclose a "dough having a cellular network" let alone

“an elastic gluten based dough having a cellular network” or a method for creating such a structure. Indeed, as stated on page 1, lines 12 – 13, a goal of Le Flecher is to create “...a cake dough which is sufficiently liquid to be pourable and which can contain a high amount of liquid whole eggs as is required for certain cakes.” In the example given on page 3, line 46 – page 4, line 23 Le Flecher indicates intensive mixing under a vacuum (see page 4, lines 14 – 19), breaking the vacuum and injecting nitrogen and finishing the liquid dough by mixing under N₂O pressure (page 4, lines 17 –19). Le Flecher notes, “The dough could be *poured* from the pouch directly into the baking mould and baked to yield excellent cake.” (Page 4, line 23.) Applicant respectfully submits that there is no indication in either the process used by Le Flecher or the properties of the product obtained, that Le Flecher produced the “...elastic gluten based dough having a cellular network...” of claim 1 of the instant application. Applicant respectfully submits that claim 1 recites a novel structure that is entirely different from Le Flecher and is therefore patentable under 35 USC 102(a).

Applicant submits that claims 3-5, 8, 10, 14-15 are all dependent on claim 1 and incorporate the novel structure of claim 1 and are therefore patentable under 35 USC 102(a).

Claim 29 was canceled and claim 27 was amended for the sake of clarity to recite “...An elastic gluten based dough having a cellular network....” Support for this amendment is as indicated for claim 1, as amended. Applicant respectfully refers the Examiner to the discussion of Le Flecher with regard to claim 1 as it is equally applicable to claim 27, as amended. Applicant respectfully submits that claim 27, as amended, recites a novel structure that is entirely different from that taught by Le Flecher and is therefore patentable under 35 USC 102(a).

Claim 30 was amended to make it dependent on claim 27. Applicant respectfully submits that claims 28 and 30, as amended, both dependent upon claim 27 incorporate the novel structure of claim 27 and are therefore patentable under 35 USC 102(a).

§103 Rejection of the Claims

Claims 2, 6, 7, 9, 11-13 and 30 were rejected under 35 USC § 103(a) as being unpatentable over Le Flecher et al. Applicant submits that claims 2, 6, 7, 9, and 11 – 13 are dependent on claim 1 and therefore incorporate all of the novel and unobvious structure of claim 1. As discussed above claim 1, as amended, recites “...an elastic gluten based dough having a cellular network....” There is no suggestion or instruction on how to create such a structure in Le Flecher. Indeed, as discussed above, Le Flecher emphasizes creation of a pourable cake dough rather than “...an elastic gluten based dough having a cellular network....” as recited in claim 1, as amended. Applicant respectfully submits that claim 1, as amended, recites novel and unobvious structure and is patentable under 35 USC 103(a). Applicant further respectfully submits that claims 2, 6, 7, 9, 11 – 13 are all dependent on claim 1 and incorporate the novel and unobvious structure of claim 1 and are therefore patentable under 35 USC 103(a).

Claim 30, as amended, is dependent on claim 27. Claim 27, as amended, recites: “...An elastic gluten based dough having a cellular network” Applicant respectfully submits that the previous argument with regard to the unobviousness of claim 1 also applies to claim 27, as amended. Applicant respectfully submits that claim 27, as amended, recites novel and unobvious structure and is patentable under 35 USC 103(a). Applicant further respectfully submits that claim 30, as amended, is dependent on claim 27 and incorporates the novel and unobvious structure of claim 27 and is therefore patentable under 35 USC 103(a).

Addition of New Claims

New independent claim 31 has been added as well as new claims 32 – 34 dependent on claim 31 and claim 35 dependent on claim 32 were added to more completely cover certain aspects of the applicant’s invention. Support for new claims 31 - 35 may be found at page 2, lines 15 – 16 and 30 – 33; page 3, lines 9 – 15; page 9, lines 22 – 31; page 10, lines 2 – 35; page 11, lines 1 – 25. New independent claim 31 recites the novel and unobvious structural feature of: “A ready-to-use expanded dough article, comprising an elastic gluten based dough having a

cellular network structure and a substantially gas-impermeable container within which the dough is sealed...” that is made by a method which comprises “...expanding the dough by injecting, mixing or blending an inert gas into the dough to form an expanded dough comprising a cellular structure; transferring the expanded dough to the container; and sealing the container.”

Applicant further respectfully submits that new claim 31 is novel and unobvious under sections 35 USC 102(a) and 103(a) relative to the art cited by the Examiner and refers to the Examiner to the corresponding arguments for claim 1 which apply here as well. Applicant also respectfully submits that Le Flecher does not teach or suggest formation of “A ready-to-use expanded dough article, comprising an elastic gluten based dough having a cellular network structure...” let alone any method of creating such a structure.

Dependent claim 32 recites that the “...inert gas is selected from the group consisting of N₂O, N₂, CO₂ and mixtures thereof.” Dependent claim 33 recites that the dough that is expanded “...further comprises an encapsulated leavening agent.” Dependent claim 34 recites that “...mixing the dough and expanding the dough are done concurrently.” Claim 35 recites that the expanded dough article of further comprises “...sealing the container so as to form a headspace with the headspace having an oxygen concentration that is not more than 4% by volume.” Applicants submit that new independent claim 31 and new claims 32 - 35 which incorporate the novel and unobvious features of claim 31 are patentable under sections 35 USC 102(a) and 35 USC 103(a).

Double Patenting Rejection

Claims 1-15 and 27-30 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-15 of copending Application No. 09/707676. Applicant respectfully traverses the Examiner’s provisional rejection on the following grounds: Both the original and amended claims as well as the new claims of the instant application claim a leavened dough article comprising a “ ... dough having a cellular network ...” This structure is patentably distinct from the unleavened articles described and claimed in Application No.

09/707676. Applicant respectfully requests that the Examiner reconsider this rejection and withdraw it.

Conclusion

The Applicant respectfully requests reconsideration of the amended, unamended and new claims now in the application and submits these claims have overcome the Examiner's rejections based on sections 102(a) and 103(a) and are in condition for allowance. Notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 612-373-6976 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account Nuo. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 28th day of February, 2002.

Anne M. Richards

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Signature

CLEAN VERSION OF PENDING CLAIMS

INERT-GAS BASED LEAVENED DOUGH SYSTEM

Applicant: Venkatachalam Narayanaswamy et al.

Serial No.: 09/707,184

Sub B15
At
1. (Amended) A ready-to-use dough article, comprising:

a substantially gas-impermeable container;

an elastic gluten based dough having a cellular network disposed within the container, comprising:

flour, a fat and water wherein the water activity is less than about 0.85; and

an inert gas disposed within the container and within the cellular network of the dough containing less than 4% residual oxygen wherein the dough is substantially free of an active leavening agent.

2. The dough article of claim 1 wherein the dough is substantially free of a CO₂ gas producing leavening agent.

3. The dough article of claim 1 wherein the dough comprises an encapsulated leavening ingredient.

4. The dough article of claim 1 wherein the dough further comprises a polyol.

5. The dough article of claim 1 wherein the inert gas is nitrous oxide or nitrogen or carbon dioxide or mixtures of these gases.

6. The dough article of claim 1 wherein the inert gas is a mixture of carbon dioxide and nitrous oxide.

7. The dough article of claim 1 wherein the dough is substantially free of sugar.
 8. The dough article of claim 1 wherein the gas-impermeable container comprises a pouch.
 9. The dough articles of claim 1 wherein the gas-impermeable container comprises a baking pan.
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- Sub B27
- Q2
11. The dough article of claim 1 wherein the dough is a biscuit dough.
 12. The dough article of claim 1 wherein the dough is a roll dough.
 13. The dough article of claim 1 wherein the dough is a scone dough.
 14. The dough article of claim 1 wherein the fat does not exceed about 25% of the dough by weight.
 15. The dough article of claim 1 wherein the density of the dough ranges from 0.7 to 1.1 g/cc.

16. (Provisionally Canceled) A method for making a ready-to-use dough article, comprising:
 - preparing a dry blend comprising flour;
 - preparing a wet blend comprising water and fat;
 - mixing the wet blend and dry blend to form a dough that has a water activity no greater than 0.85; and
 - injecting an inert gas into the dough to form a dough that comprises a cellular structure.

17. (Provisionally Canceled) The method of claim 16 and further comprising mixing the dough concurrently with injecting the inert gas.

18. (Provisionally Canceled) The method of claim 16 and further comprising adding an encapsulated leavening agent to the dough.
19. (Provisionally Canceled) The method of claim 18 wherein the encapsulated leavening agent is added to the dry blend.
20. (Provisionally Canceled) The method of claim 18 wherein the wet blend and dry blend are combined under anaerobic conditions.
21. (Provisionally Canceled) The method of claim 16 and further comprising adding the dough to a gas-impermeable container after injecting with the inert gas.
22. (Provisionally Canceled) The method of claim 21 wherein the dough is added to the container at room temperature.
23. (Provisionally Canceled) The method of claim 21 and further comprising sealing the container so as to form a headspace that has an oxygen concentration that is not more than 4% by volume.
24. (Provisionally Canceled) The method of claim 22 wherein the sealed container is substantially free of pressurization.
25. (Provisionally Canceled) The method of claim 21 and further comprising baking the dough in the container.
26. (Provisionally Canceled) A method for expanding a dough, comprising:
 preparing a high density dough; and
 admixing an inert gas into the high density dough to make a low density dough with an

expanded, cellular structure.

Sub B5
Sub B37
~~29. (Amended) A ready-to-use dough article, comprising:~~

~~A substantially gas-impermeable container;~~

~~An elastic gluten based dough having a cellular network disposed within the container, comprising:~~

~~Flour, a fat, water wherein the water activity is less than about 0.85 and an encapsulated leavening ingredient; and~~

~~An inert gas disposed within the container containing less than about 4% residual oxygen.~~

28. The dough article of claim 27 wherein the inert gas is nitrous oxide or nitrogen or carbon dioxide or mixtures of these gases.

A3
Sub B4
30. (Amended) The dough article of claim 27 wherein the dough is pizza dough, biscuit dough or English muffins.

Sub B5
~~31. (New) A ready-to-use expanded dough article, comprising an elastic gluten based dough having a cellular network structure and a substantially gas-impermeable container within which the dough is sealed, made by a method comprising:~~

~~preparing a dry blend comprising flour;~~

~~preparing a wet blend comprising water and fat;~~

~~mixing the wet blend and dry blend to form a dough that has a water activity no greater than 0.85;~~

~~expanding the dough by injecting, mixing or blending an inert gas into the dough~~

A4
at
~~to form an expanded dough comprising a cellular structure;~~

~~transferring the expanded dough to the container; and sealing the container.~~

32. (New) The expanded dough article of claim 31 in which the inert gas is selected from the group consisting of N₂O, N₂, CO₂ and mixtures thereof.

33. (New) The expanded dough article of claim 31 in which the dough formed by mixing the dry blend and the wet blend further comprises an encapsulated leavening agent.

34. (New) The expanded dough article of claim 31 in which mixing the dough and expanding the dough are done concurrently.

35. (New) The expanded dough article of claim 32 further comprising sealing the container so as to form a headspace with the headspace having an oxygen concentration that is not more than 4% by volume.